

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A computer-implemented method of optimizing the synchronization of data between a client computer having a client database and a server computer having a server database, comprising:

communicating a plurality of database items that maintain a parent-child hierarchical tree relationship from the client computer to the server computer, wherein the plurality of database items includes a parent database item;

determining if the parent database item is improperly received, wherein the determination of an improperly received parent database item is based upon the detection of a data transfer error that is characteristic of an error condition associated with the parent database item;

selectively communicating a child database item associated with the parent database item from the client computer to the server computer, only if a data transfer error that is characteristic of an error condition was not detected with respect to the parent database item; and

synchronizing the communicated child database item with a corresponding child database item stored on the server computer.

2. (Currently amended) A computer-implemented method of optimizing the synchronization of data between a client computer having a client database and a server computer having a server database, wherein each database comprises a plurality of database items that maintain a parent-child hierarchical tree relationship comprising at least one parent database item and at least one associated child database item, comprising:

receiving at the server computer a parent database item transferred from the client computer that maintains a parent-child hierarchical tree relationship with child database items in the client database;

assigning a status code to the parent database item received at the server computer, the status code being based upon the detection or non-detection of a data transfer error that is characteristic of an error condition;

transmitting the status code assigned to the parent database item to the client computer, wherein the status code is assigned to the parent database item stored in the client database;

updating a status code of the child database items associated with the parent database item in the client database, the updated status code of child database items being based on the status code of the parent database item;

selectively communicating child database items associated with the parent database item from the client computer to the server computer, wherein child database items associated with the parent database item are communicated if the status code indicates a non-detection of a data transfer error that is characteristic of an error condition associated with the parent database item; and

synchronizing the communicated child database item with a corresponding child database item stored on the server computer.

3. (Original) The method of Claim 2, wherein the status code is assigned by the server computer.

4. (Previously presented) The method of Claim 2, further comprising:
assigning a server ID to the database item received at the server computer if no transfer error was detected that is characteristic of an error condition; and
transmitting the server ID assigned to the database item to the client computer.

5. (Previously presented) The method of Claim 4, wherein the status code and the server ID are assigned by the server computer.

6. (Previously presented) The method of Claim 4, further comprising updating a server ID of child database items associated with the parent database item, the updated server ID

of the child database items being based on the server ID of the parent database item; and wherein the selective transmission of child database items associated with the parent database item to the server computer is also based on the server ID of the child database item.

7. (Previously presented) The method of Claim 2, further comprising transmitting at least one new database item to the client computer, a server ID being assigned to said at least one new database item.

8. (Previously presented) The method of Claim 7, wherein the new database items include a server ID assigned by the server computer.

9. (Previously presented) The method of Claim 2, wherein the hierarchy further comprises at least one grandchild database item associated with the at least one child database item and the at least one parent database item, the method further comprising:

assigning a child status code to child database items associated with the parent database item received at the server computer, the child status code being based upon the detection or non-detection of a data transfer error that is characteristic of an error condition associated with the child database item;

updating a status code of grandchild database items associated with a child database item and associated with the parent database item, the updated status code of the grandchild database item associated with a child database item associated with the parent database item being based on the child status codes;

selectively communicating grandchild database items associated with a child database item associated with the parent database item from the client computer to the server computer, wherein grandchild database items associated with a child database item associated with the parent database item are communicated if the status code of the grandchild database item indicate a non-detection of a data transfer error that is characteristic of an error condition associated with the child database item; and

synchronizing the communicated grandchild database item with a corresponding grandchild database item stored on the server computer.

10. (Previously presented) The method of Claim 9, wherein the status codes of child database items are assigned by the server computer.

11. (Original) A computer-readable medium containing computer-readable instructions which, when executed by a computer, perform the method of any one of Claims 2-10.

12. (Original) A computer-controlled apparatus for performing the method of any one of Claims 2-10.

13. (Currently amended) A computer-implemented method of optimizing the synchronization of data stored in a client computer database with data stored in a server computer database, wherein each database comprises a plurality of database items arranged in a parent-child hierarchical tree relationship comprising at least one parent database item and at least one associated child database item, comprising:

transmitting a parent database item that maintains a parent-child hierarchical tree relationship with child database items in the client database from a client computer to a server computer;

receiving at the client computer mapping information for the parent database item generated by the server computer, the mapping information being based upon the detection or non-detection of a data transfer error that is characteristic of an error condition associated with the parent database item;

updating a status code of child database items associated with the parent database item, the updated status code of child database items being based on the mapping information; and

selectively transmitting child database items from the client computer to the server computer, wherein child database items associated with the parent database item are

communicated if the mapping information indicates a non-detection of a data transfer error that is characteristic of an error condition associated with the parent database item; and

synchronizing the communicated child database item with a corresponding child database item stored on the server computer.

14. (Previously presented) The method of Claim 13, wherein:

the mapping information also includes a server ID;

the method further comprises updating a server ID of child database items associated with the parent database item, the updated server ID being based on the mapping information; and

the selective transmission of child database items from the client computer to the server computer is also based on the server ID of the child database items.

15. (Previously presented) The method of Claim 13, further comprising receiving at least one new database item from the server computer, a server ID being assigned to each of said at least one new database item.

16. (Original) A computer-readable medium containing computer-readable instructions which, when executed by a computer, perform the method of any one of Claims 13-15.

17. (Original) A computer-controlled apparatus for performing the method of any one of Claims 13-15.

18. (Previously presented) A method of optimizing the transfer of data stored in a client computer database and to a server computer for storage in a server computer database, wherein each database comprises a plurality of database items arranged in a parent-child hierarchical tree relationship comprising at least one parent database item and at least one associated child database item, comprising:

receiving, at the server computer, a parent database item from the client computer;

assigning a status code to the parent database item, the status code being based upon the detection or non-detection of a data transfer error that is characteristic of an error condition associated with the parent database item;

transmitting the status code assigned to the parent database item from the server computer to the client computer, wherein the status code enables the client computer to selectively communicate at least one child database item associated with the parent database item if the status code assigned to the parent database item indicates the absence of a data transfer error; and

receiving at the server computer at least one child database item associated with the parent database item, if the status code assigned to the parent database item indicates the absence of a data transfer error that is characteristic of an error condition.

19. (Previously presented) The method of Claim 18, further comprising:

assigning a server ID to the received parent database item; and

transmitting the server ID assigned to the parent database item from the server computer to the client computer.

20. (Previously presented) The method of Claim 18, wherein the hierarchy further comprises at least one grandchild database item associated with the at least one child database item and the at least one parent database item, the method further comprising:

assigning a child status code to child database items associated with the parent database item received at the server computer, the child status code being based upon the detection or non-detection of a data transfer error that is characteristic of an error condition associated with the child database item;

communicating the child status codes from the server computer to the client computer; and

receiving grandchild database items associated with a child database item associated with the parent database item from the client computer, wherein grandchild database items are communicated if the child status code indicates a non-detection of a data transfer error that is characteristic of an error condition associated with the child database item.

21. (Original) A computer-readable medium containing computer-readable instructions which, when executed by a computer, perform the method of any one of Claims 18-20.

22. (Original) A computer-controlled apparatus for performing the method of any one of Claims 18-20.